Fill in the Blanks Tree Diagrams for Dependent Events

| Question | Tree Diagram | Probability |  |
| :---: | :---: | :---: | :---: |
| There are some white counters and some red counters in a bag. Two counters are taken from the bag at random. Complete the tree diagram and calculate the missing probabilities. | 1st Counter | $P(W W)=\frac{3}{8} \times \frac{2}{7}=$ | $\frac{6}{56}$ |
|  |  | $P(W R)=\frac{3}{8} \times \frac{5}{7}=$ | $\frac{15}{56}$ |
|  |  | $P(R W)=\frac{5}{8} \times \frac{3}{7}=$ | $\frac{15}{56}$ |
|  |  | $P(R R)=\frac{5}{8} \times \frac{4}{7}=$ | $\frac{20}{56}$ |
| There are some apples and some oranges in a fruit bowl. Two pieces of fruit are chosen at random. Complete the tree diagram and calculate the missing probabilities. | $\frac{\text { 1st Frui }}{\frac{3}{10}}$ | $P(A A)=\frac{3}{10} \times \frac{2}{9}=$ | $\frac{6}{90}$ |
|  |  | $P(A O)=\frac{3}{10} \times \frac{7}{9}=$ | $\frac{21}{90}$ |
|  |  | $P(O A)=\frac{7}{10} \times \frac{3}{9}=$ | $\frac{21}{90}$ |
|  |  | $P(O O)=\frac{7}{10} \times \frac{6}{9}=$ | $\frac{42}{90}$ |
| Milo has some black socks and some grey socks in a drawer. He chooses two socks at random. Draw a tree diagram and calculate the missing probabilities. |  | $P(B B)=\frac{7}{12} \times \frac{6}{11}=$ | $\frac{42}{132}$ |
|  |  | $P(B G)=\frac{7}{12} \times \frac{5}{11}=$ | $\frac{35}{132}$ |
|  |  | $P(G B)=\frac{5}{12} \times \frac{7}{11}=$ | $\frac{35}{132}$ |
|  |  | $P(G G)=\frac{5}{12} \times \frac{4}{11}=$ | $\frac{20}{132}$ |
| Adrianna buys some sausage rolls and some cheese pasties from the bakery. She chooses two items at random to eat for lunch. Draw a tree diagram and calculate the missing probabilities. | $\begin{array}{lc}  & \begin{array}{l} \text { 2nd Item } \\ \text { Item } \\ \frac{6}{10} \end{array} \end{array}$ | $P(S S)=\frac{7}{11} \times \frac{6}{10}=$ | $\frac{42}{110}$ |
|  |  | $P(S C)=\frac{7}{11} \times \frac{4}{10}=$ | $\frac{28}{110}$ |
|  |  | $P(C S)=\frac{4}{11} \times \frac{7}{10}=$ | $\frac{28}{110}$ |
|  |  | $P(C C)=\frac{4}{11} \times \frac{3}{10}=$ | $\frac{12}{110}$ |

